What is claimed is:

1. A molecular pump comprising:

a cylindrical casing provided with a gas inlet port and a gas discharge port;

a stator formed within said casing;

a shaft disposed concentrically with said stator;

a bearing pivotally supporting said shaft so as to be rotatable relative to said stator;

a rotor mounted on said shaft and rotating integrally with said shaft;

a motor to drive said shaft; and

a flange portion provided at said gas inlet port side of said casing and provided with a buffering portion to be deformed by a shock due to a torque in the rotation direction of said rotor acting on said casing.

2. The molecular pump according to claim 1, wherein

said flange portion has a plurality of bolt holes for fixing said flange portion, and

said buffering portion has a thin-wall portion provided adjacently to said bolt hole in a direction opposite to the rotation direction of said rotor.

3. The molecular pump according to claim 2, wherein said thin-wall portion has a cutout section formed in an axial direction of said bolt hole.

4. The molecular pump according to claim 1, wherein said buffering portion is constituted by an elongated hole section having a width in the radial direction of said rotor changed

along the rotation direction of said rotor.

5. The molecular pump according to claim 4, wherein said elongated hole section has a positioning portion for positioning a bolt.

6. A flange for connecting a gas inlet port of a molecular pump to an evacuating port of a vacuum vessel comprising:

a plurality of bolt holes for fixing said flange; and

a thin-wall portion provided adjacently to said bolt hole in the rotation direction of a rotor.

7. The molecular pump according to claim 1, wherein

said flange portion has a plurality of bolt holes for fixing said flange portion, and

said buffering portion has a thin-wall portion in a flat plate shape provided adjacently to said bolt hole in a direction opposite to the rotation direction of said rotor, and a through hole formed apart from said bolt hole in the direction opposite to the rotation direction of said rotor and via said thin-wall portion.

8. The molecular pump according to claim 7, wherein said bolt hole has a guiding portion for guiding a bolt inserted through said bolt hole toward a center of said thin-wall portion.

9. The molecular pump according to claim 7, wherein said thin-wall portion has a plastic deformation strength lower than a rupture strength of a bolt inserted through said bolt hole.

10. The molecular pump according to claim 8 wherein said thin-wall portion has a plastic deformation strength lower than a rupture strength of a bolt inserted through said bolt hole.

11. The molecular pump according to claim 7, wherein said molecular pump further comprises a washer interposed between a bolt-head of a bolt inserted through said bolt hole and said flange portion, and

a portion at least touching said flange portion is existent in a region of said washer between the center of said bolt and a washer end in the rotation direction of said rotor, at a position where said bolt has been moved in the direction of said thin-wall portion by a shock caused by collision of said rotor.

12. The molecular pump according to claim 8, wherein said molecular pump further comprises a washer interposed between a bolt-head of a bolt inserted through said bolt hole and said flange portion, and

a portion at least touching said flange portion is existent in a region of said washer between the center of said bolt and a washer end in the rotation direction of said rotor, at a position where said bolt has been moved in the direction of said thin-wall portion by a shock caused by collision of said rotor.

13. The molecular pump according to claim 9, wherein said molecular pump further comprises a washer interposed between a bolt-head of a bolt inserted through said bolt hole and said flange portion, and

a portion at least touching said flange portion is existent in a region of said washer between the center of said bolt and a washer end in the rotation direction of said rotor, at a position where said bolt has been moved in the direction of said thin-wall portion by a shock caused by collision of said rotor.

14. The molecular pump according to claim 10, wherein said molecular pump further comprises a washer interposed between a bolt-head of a bolt inserted through said bolt hole and said flange portion, and

a portion at least touching said flange portion is existent in a region of said washer between the center of said bolt and a washer end in the rotation direction of said rotor, at a position where said bolt has been moved in the direction of said thin-wall portion by a shock caused by collision of said rotor.